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APPALEPTONETA COMA (BARROWS), A SPIDER NEW TO VIRGINIA (ARANEAE, LEPTONETIDAE) -- The spider family Leptonetidae includes small, fragile, long-legged spiders inhabiting leaf litter and caves. Except for a single eyeless one from a Georgia cave, the species in eastern North America may be easily recognized by their unique eye arrangement: a short arc of four close-set eyes in front, and a single pair far back on the carapace (Ledford et al., 2005). In North America, four genera have been recognized: *Archoleptoneta* Gertsch 1974 (see also Platnick, 1994), *Neoleptoneta* Brignoli 1972 (see also Cokendolpher, 2004), *Calileptoneta* Platnick 1986 (revised by Ledford, 2004), and *Appaleptoneta* Platnick 1986. *Appaleptoneta* includes fifteen described species ranging through the southern Appalachians from southern West Virginia to northern Alabama. The known species were described and illustrated (as species of *Leptoneta*) by Gertsch (1974); later, seven of Gertsch's *Leptoneta* species were placed in the new genus *Appaleptoneta* by Platnick (1986). The genus was established largely on the unique form of the cuticular plates surrounding glands on the patellae of the legs; these can only be studied in detail using scanning electron microscopy. Ledford (2004) found significant diversity, even within single species, in the gland plates of *Calileptoneta;* the glands occur not only on the patellae but the femora and tibiae as well. A single Appalachian species, "*Leptoneta*" *sandra* Gertsch 1974, is *incertae sedis* due to the unique form of the patellar plates (Platnick, 1986), but otherwise closely resembles *Appaleptoneta* species. Based on Ledford's (2004) results, the unusual form of the plates might not disqualify this species from being part of *Appaleptoneta.*

As is well known among students of arachnid and myriapod systematics, cave habitats have been far more thoroughly collected than the soil and litter biotope, where many of the same taxa as those inhabiting caves may be found. Only five of the fifteen eastern North American leptonetid species were collected on the surface; the remaining ten are known from single collections made in single caves.

Two surface-dwelling leptonetid species have been recorded previously from Virginia. "*Leptoneta*" *sandra* has already been alluded to; in 1971, my student, Sandra Bird Porterfield, and I collected many specimens from leaf litter on both the northwestern (Mercer Co., West Virginia) and southeastern (Tazewell Co., Virginia) slopes of East River Mountain, some of which were the basis for Gertsch's (1974) later description. Mrs. Porterfield collected material through a year and produced an unpublished study on the species' life cycle. No further records have been published in the intervening 33 years. *Appaleptoneta silvicultrix* (Crosby & Bishop) 1925 was the second species of leptonetid to be described from North America, and the first species from the East. It is known from a number of localities in western North Carolina and from a single collection I made in Cumberland Gap National Park, Lee Co., Virginia (Gertsch, 1974).

Appaleptoneta coma (Barrows) 1940 was described from a single sample obtained near Gatlinburg, Tennessee, and has not been found again from 1936 (Gertsch, 1974) until 2007. The species is easily recognized by the unique row of long setae on the bulb of the male palpus. The new record is as follows:

VIRGINIA: *Washington County*: Mount Rogers National Recreation Area, Beartree Division, Beaver Flats Campground, 23 May 2007, W. A. Shear leg. 3♂♂, 1♀.

The specimens, which will be deposited in the Virginia Museum of Natural History, were taken from a sample of leaf litter dominated by hemlock, birch, and maple leaves and underlain by a deep layer of duff. The general habitat is a broad, flat, forested area braided with small streams and with scattered small ponds and wetlands; the forest may be secondary but many of the hemlocks are large enough to suggest that elements of a primary forest still remain. The sample was transported to Hampden-Sydney and animals were extracted by means of Berlese funnels. Surface-dwelling leptonetids are difficult to collect because of their habitat, small size, and delicacy; Berlese extraction seems to be the most effective way to find them, and undoubtedly more complete sampling through the Appalachian region would show them to be much more common than current data indicate. The appearance of both *A. silvicultrix* and *A. coma* in Virginia, both in places distant from other published localities, suggests that species of the genus might be widespread.

Because the drawings by Gertsch (1974) were made using low magnification, many details of the surprisingly complex male palpus were not depicted, though the illustrations are sufficient to identify the species. Ledford (2004) found that females of *Calileptoneta* could not be diagnosed using Gertsch's drawings, and Cokendolpher (2004) concurred for *Neoleptoneta.* Ledford used both compound microscopy and scanning electron microscopy to study the palpi and provided a terminology for the various parts. A revision of *Appaleptoneta*, involving extensive new collecting, is very desirable; if females cannot be diagnosed on the basis of Gertsch's (1974) revision, it

will be especially important to collect males at the type localities of those *Appaleptoneta* species based only on females.

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LITERATURE CITED

Cokendolpher, J. C. 2004. A new *Neoleptoneta* spider from a cave at Camp Bullis, Bexar County, Texas (Araneae: Leptonetidae). Texas Memorial Museum Speleological Monographs 6: 63-69.

Gertsch, W. J. 1974. The spider family Leptonetidae in North America. Journal of Arachnology 1: 145-203.

Ledford, J. M. 2004. A revision of the spider genus *Calileptoneta* Platnick (Araneae, Leptonetidae), with notes on morphology, natural history and biogeography. Journal of Arachnology 32: 231-269.

Ledford, J. M., D. Ubick, & J. C. Cokendolpher. 2005. Leptonetidae. Pp. 122-123 *In* D. Ubick, P. Paquin, P. E. Cushing, & V. Roth (eds.), Spiders of North America, An Identification Manual. American Arachnological Society.

Platnick, N. I. 1986. On the tibial and patellar glands, relationships, and American genera of the spider family Leptonetidae (Arachnida, Araneae). American Museum Novitates 2855: 1-16.

Platnick, N. I. 1994. A new spider of the genus *Archoleptoneta* (Araneae, Leptonetidae) from Panama. American Museum Novitates 3101: 1-8.

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CHINESE SOFTSHELL TURTLE (*PELODISCUS SINENSIS*) IN THE POTOMAC RIVER AND NOTES ON EASTERN SPINY SOFTSHELLS (*APALONE SPINIFERA*) IN NORTHERN VIRGINIA -- Two recent observations of softshell turtles from the Potomac and Occoquan rivers, Fairfax County, Virginia, indicate that this group of vertebrates may have been introduced into northern Virginia. One is an Asian species, whereas the other is North American, but not native to northern Virginia.

On 3 August 2006, a *Pelodiscus sinensis* (Chinese Softshell; Fig. 1) was observed on a low sloping, sand and gravel bank in a bay of the Potomac River at Dyke Marsh along the Haul Road in Fairfax County (77° 03' 0.48" W, 38° 46' 25.57" N). It disappeared into nearby grassy cover upon closer approach by the observer, after being photographed. On 21 July 2007, a fisherman caught a juvenile female *Apalone spinifera* (Fig. 2) in the Occoquan River (Fairfax County/Prince William County line) near the marina approximately 9 km from its confluence with the Potomac (77° 15' 03.38" W, 38° 40' 38.21" N). The turtle was brought to the nature center at Fountain Head Regional Park. Additional, unverified sightings of *A. spinifera* by boaters in this area were reported to Ben Fleming, park naturalist, after the first one was captured (B. Fleming, pers. comm.). The Occoquan River site is well outside of the natural range of this species in southwestern Virginia (Mitchell & Reay, 1999).

The closest known population of Eastern Spiny Softshells, also an introduced population, is in southern New Jersey in the Maurice River system (Conant & Collins, 1991). Mansueti & Wallace (1960) reported on an attempt to establish this species in the Potomac River below the dam at Cumberland, Maryland, in 1883. Harris (2004) noted recently that the status of a putative population in the canal below Great Falls on the Potomac River, Montgomery County, Maryland, is unknown, as is the fate of the 1883 introduction.

In Virginia, *Apalone spinifera spinifera* is native only to the Clinch and Holston river drainages in the southwestern portion of the Commonwealth (Mitchell, 1994; Mitchell & Reay, 1999). The species is listed in Virginia as status undetermined and of moderate conservation need (Mitchell, 1991; VA Dept. Game & Inland Fisheries http://www.bewildvirginia.org/species/reptiles.pdf, accessed 24 December 2007). Introductions have been reported from Bull Run Creek (an Occoquan tributary), Fairfax County, in 1982 (Mitchell, 1994) and in Lake Whitehurst in the City of Norfolk (Mitchell & Southwick, 1993).